



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R4-ES-2022-0098; FF09E21000 FXES111109FEDR 234]

RIN 1018–BG85

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Sickle Darter

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the sickle darter (*Percina williamsi*) under the Endangered Species Act of 1973 (Act), as amended. In total, approximately 104 river miles (168 river kilometers) in Bledsoe, Blount, Morgan, and Roane Counties, Tennessee, and Scott, Smyth, and Washington Counties, Virginia, fall within the boundaries of the proposed critical habitat designation. If we finalize this rule as proposed, it would extend the Act's protections to this species' critical habitat. We also announce the availability of a draft economic analysis of the proposed designation of critical habitat for the sickle darter.

DATES: We will accept comments received or postmarked on or before [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Comments submitted electronically using the Federal eRulemaking Portal (see

ADDRESSES, below) must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for a public hearing, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: *Written comments:* You may submit comments by one of the following

methods:

(1) *Electronically*: Go to the Federal eRulemaking Portal:

<https://www.regulations.gov>. In the Search box, enter FWS-R4-ES-2022-0098, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment.”

(2) *By hard copy*: Submit by U.S. mail to: Public Comments Processing, Attn: FWS-R4-ES-2022-0098, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041–3803.

We request that you send comments only by the methods described above. We will post all comments on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

Availability of supporting materials: For the proposed critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the decision file for this critical habitat designation and are available at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0098 and on the Service’s website at <https://www.fws.gov/office/tennessee-ecological-services>. Additional supporting information that we developed for this critical habitat designation will be available on the Service’s website, at <https://www.regulations.gov>, or both.

FOR FURTHER INFORMATION CONTACT: Daniel Elbert, Field Supervisor, U.S. Fish and Wildlife Service, Tennessee Ecological Services Field Office, 446 Neal Street, Cookeville, TN 38501; telephone 931–528–6481. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the

United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act, any species that is determined to be an endangered or threatened species requires critical habitat to be designated, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process.

What this document does. We propose the designation of critical habitat for the sickle darter, which is listed as a threatened species (see 87 FR 67380; November 8, 2022).

The basis for our action. Section 4(a)(3) of the Act requires the Secretary of the Interior (Secretary) to designate critical habitat concurrent with listing to the maximum extent prudent and determinable. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. Due to the ongoing challenges regarding the 2019 regulations, we also seek comments on whether and how applying the regulations that were in effect before the 2019 regulations would alter any of these analyses.

We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 et seq.), including information to inform the following factors that the current regulations identify as reasons why designation of critical habitat may be not prudent:

(a) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(b) The present or threatened destruction, modification, or curtailment of a species’ habitat or range is not a threat to the species, or threats to the species’ habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(c) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(d) No areas meet the definition of critical habitat; or

(e) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

In addition, we seek comment regarding whether and how this information would differ under the factors that the pre-2019 regulations identify as reasons why designation of critical habitat may be not prudent.

(2) Specific information on:

(a) The amount and distribution of sickle darter habitat;

(b) Any additional areas occurring within the range of the species in Bledsoe, Blount, Morgan, and Roane Counties, Tennessee, and Scott, Smyth, and Washington Counties, Virginia, that should be included in the designation because they (i) are occupied at the time of listing and contain the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection, or (ii) are unoccupied at the time of listing and are essential for the conservation of the species; and

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change; and

(d) For areas not occupied at the time of listing that are essential for the conservation of the species, we particularly seek comments:

(i) Regarding whether occupied areas are adequate for the conservation of the species; and

(ii) Providing specific information regarding whether or not unoccupied areas would, with reasonable certainty, contribute to the conservation of the species and contain at least one physical or biological feature essential to the conservation of the species;

We also seek comments or information regarding whether areas not occupied at the time of listing qualify as “habitat” for the species.

(3) Land use designations and current or planned activities in the subject areas

and their possible impacts on proposed critical habitat.

(4) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the related benefits of including or excluding specific areas.

(5) Information on the extent to which the description of probable economic impacts in the draft economic analysis is a reasonable estimate of the likely economic impacts and any additional information regarding probable economic impacts that we should consider.

(6) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act. If you think we should exclude any additional areas, please provide information supporting a benefit of exclusion.

(7) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide substantial information necessary to support a determination. Section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific information available.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by

the methods described in **ADDRESSES**.

If you submit information via <https://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on <https://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <https://www.regulations.gov>.

Because we will consider all comments and information we receive during the comment period, our final critical habitat designation may differ from this proposal. Based on the new information we receive (and any comments on that new information), our final designation may not include all areas proposed, may include some additional areas that meet the definition of critical habitat, or may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in the extinction of the species.

Public Hearing

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. Requests must be received by the date specified in **DATES**. Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule a public hearing on this proposal, if requested, and announce the date, time, and place of the hearing, as well as how to obtain reasonable accommodations, in the *Federal Register* and local newspapers at least 15 days before the hearing. For the immediate future, we will provide these public hearings using webinars that will be announced on the Service's website, in addition to the *Federal Register*. The use of these

virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

Previous Federal Actions

On November 12, 2020, we published in the *Federal Register* (85 FR 71859) a proposed rule to list the sickle darter as a threatened species with a rule issued under section 4(d) of the Act (a “4(d) rule”). On November 8, 2022, we published our final determination in the *Federal Register* (87 FR 67380) and added the sickle darter as a threatened species to the List of Endangered and Threatened Wildlife at 50 CFR 17.11(h) with a 4(d) rule codified at 50 CFR 17.44.

In our November 12, 2020, proposed rule, we determined that critical habitat was prudent but not determinable because we lacked specific information on the impacts of our designation. In our November 8, 2022, final listing rule, we stated we were in the process of obtaining information on the impacts of the designation.

All Federal actions prior to November 12, 2020, are described in detail in the proposal to list the sickle darter as a threatened species under the Act (85 FR 71859; November 12, 2020). Additional information may be found in the final listing rule (87 FR 67380; November 8, 2022).

It is our intent to discuss in this proposed rule only those topics directly relevant to the designation of critical habitat for the sickle darter. For more information on the taxonomy, life history, habitat, population descriptions, and factors affecting the species, please refer to the November 12, 2020, proposed listing rule (85 FR 71859) and the November 8, 2022, final listing rule (87 FR 67380).

Peer Review

A species status assessment (SSA) team prepared an SSA report for the sickle darter. The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents a compilation of the best scientific and commercial data available concerning the status of the species, including the impacts of

past, present, and future factors (both negative and beneficial) affecting the species.

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we solicited independent scientific review of the information contained in the sickle darter SSA report. The Service sent the SSA report to five independent peer reviewers and received four responses. Results of this structured peer review process can be found at <https://regulations.gov> and <https://www.fws.gov/office/tennessee-ecological-services/library>. Our peer-reviewed SSA report provided the foundational science to inform this proposed critical habitat rule.

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features,

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely, by

vagrant individuals)..

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation also does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the Federal agency would be required to consult with the Service under section 7(a)(2) of the Act. However, even if the Service were to conclude that the proposed activity would likely result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement “reasonable and prudent alternatives” to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act’s definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a

critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat).

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4 of the Act requires that we designate critical habitat based on the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the *Federal Register* on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information from the species status assessment (SSA) report and information developed during the listing process for the species. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan for the species; articles in peer-reviewed journals; conservation plans developed by

States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of the species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of those planning efforts calls for a different outcome.

Prudency Determination

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the Secretary

may, but is not required to, determine that a designation would not be prudent in the following circumstances:

(i) The species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species;

(ii) The present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or threats to the species' habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(iii) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

As described in the final listing rule, no imminent threat of collection or vandalism was identified under Factor B in the final listing rule for the sickle darter. The identification and mapping of proposed critical habitat units is not expected to initiate any such threat of collection. In our final listing determination for the sickle darter, we determined that the present or threatened destruction, modification, or curtailment of habitat or range is a threat to sickle darter, and that those threats in some way can be addressed by section 7(a)(2) consultation measures. The species occurs wholly in the jurisdiction of the United States, and we are able to identify areas that meet the definition of critical habitat. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) have been met and because the Secretary has not identified other circumstances for which this designation of critical habitat would be not prudent, we have determined that the designation of critical habitat is prudent for the

sickle darter.

Critical Habitat Determinability

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the sickle darter is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

(i) Data sufficient to perform required analyses are lacking, or

(ii) The biological needs of the species are not sufficiently well known to identify any area that meets the definition of “critical habitat.”

When critical habitat is not determinable, the Act allows the Service an additional year to publish a critical habitat designation (16 U.S.C. 1533(b)(6)(C)(ii)).

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where this species is located. This and other information represent the best scientific data available and led us to conclude that the designation of critical habitat is determinable for the sickle darter.

Physical or Biological Features Essential to the Conservation of the Species

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. The regulations at 50 CFR 424.02 define “physical or biological features essential to the conservation of the species” as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat

characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or characteristic flooding or fire regime that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, we may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

Habitats Representative of the Historical, Geographical, and Ecological Distributions of the Species

The sickle darter's historical range (prior to 2005) included nine tributary systems of the upper Tennessee River drainage in North Carolina, Tennessee, and Virginia (Menhinick et al. 1974, p. 42; Etnier and Starnes 1993, p. 576; Page and Near 2007, pp. 608–609). The sickle darter continues to occupy portions of five tributary systems in the

historical range in the upper Tennessee drainage in Tennessee and Virginia, and it occupies a sixth tributary system in Tennessee with more recently discovered occurrences (Alford 2019, pp. 6–13; Conservation Fisheries Inc (CFI) and Tennessee, Department of Environment and Conservation (TDEC) unpublished data). These six tributary systems occur in two of three historically occupied ecoregions (Ridge and Valley ecoregion and the Southwestern Appalachians ecoregion); the species is extirpated from the Blue Ridge ecoregion (EPA Level III ecoregions). Impoundments and the creation of reservoirs have reduced connectivity and isolated populations historically, affecting the current distribution of the species.

The sickle darter is most abundant, with evidence of reproduction and recruitment, in the Emory River and Little River systems in Tennessee. The species' persistence and documented recruitment within the Emory River and Little River systems suggests that physical habitat and water quality conditions within these reaches are favorable for the species. The headwaters of the Little River are protected by land use regulations and surrounding forested habitat in the Great Smoky Mountains National Park (the Park), but downstream of the Park, stream habitat and water quality are influenced by pollutants, and multiple impoundments in the watershed restrict the species' movements in the river system (Layman 1991, p. 483; Petty et al. 2017, p. 2; Alford 2019, p. 12). The species occurs in low densities in the remaining four river and tributary systems (Clinch River, North Fork Holston River, Middle Fork Holston River, and Sequatchie River systems).

The species has not been observed in North Carolina since 1940, and is now extirpated from the French Broad River system (upper French Broad River) with deterioration of water quality as the primary reason for the species' decline (Menhinick et al. 1974, p. 42; Etnier 1997, p. 78; Page and Near 2007, p. 610). The species is also likely extirpated from four tributary systems in Tennessee (Powell River, South Fork Holston

River, Watauga River, and the lower French Broad River), where it has not been observed since the 1890s, 1940s, 1980s, and 1970s, respectively (Alford 2019, pp. 12–13; CFI, TDEC, and Tennessee Valley Authority (TVA) unpublished data). The effects of impoundments, surface coal mining, and pollution have degraded water quality and stream habitat and have contributed to the extirpation of sickle darter from these four river systems. The aforementioned river systems of the upper Tennessee River drainage in the current range of the species are representative of the historical, geographical, and ecological distribution of the species.

Space for Individual and Population Growth and for Normal Behavior

The sickle darter typically occurs in slow-flowing pools of larger, upland creeks and small to medium rivers (Kuehne and Barbour 1983, p. 37; Page 1983, p. 37; Etnier and Starnes 1993, p. 576; Page and Near 2007, p. 609; Alford 2019, p. 8). Streams with sickle darter occurrence have good water quality, with low turbidity and negligible siltation (Etnier and Starnes 1993, p. 576; Alford 2019, p. 9). In these habitats, the species is most often associated with clean sand-detritus or gravel-cobble-boulder substrates, stands of American water willow (*Justicia americana*), or piles of woody debris (Etnier and Starnes 1993, p. 576; Page and Near 2007, p. 609; Alford 2019, p. 8).

Sickle darters occur most often in shallow pools near the bank or adjacent to vegetated gravel bars, but these pools are adjacent to swift currents (Alford 2019, p. 10). The species spends most of its time in the water column, often hovering a few centimeters (inches) above the stream or river bottom (Etnier and Starnes 1993, p. 576).

No species-specific information is available on movement behavior of the sickle darter. However, studies of movement behavior in two related species, the longhead darter (*Percina macrocephala*) and the frecklebelly darter (*Percina stictogaster*) suggest that the sickle darter may have similar migratory behavior (Eisenhour et al. 2009, pp. 7–12; Eisenhour et al. 2011, pp. 14–15; Eisenhour and Washburn 2016, pp. 19–24). Sickle

darters may follow seasonal movements similar to the longhead darter and move from downstream to upstream reaches following periods of severe drought (Eisenhour et al. 2011, pp. 14–15). Therefore, connectivity between suitable habitat is needed for the sickle darter's dispersal or movement within a stream system.

Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements

Sickle darters feed primarily on larval mayflies and midges, and also consume riffle beetles, caddisflies, dragonflies, and other aquatic macroinvertebrates (Page and Near 2007, pp. 609–610; Alford 2019, p. 10). Although the closely related longhead darter feeds on crayfish, the sickle darter does not (Page 1978, p. 663; Alford 2019, p. 10). The long snout and large mouth of the sickle darter likely facilitates the capture and ingestion of larger prey items such as heptageniid mayflies (Page and Near 2007, p. 609). Sickle darters deftly pluck food items from the surfaces of stones and other underwater objects while swimming above the stream bottom (Etnier and Starnes 1993, p. 576).

Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

In winter, sickle darters reside in deep pools or in slow-flowing, shallow pools in close proximity to cover (Etnier and Starnes 1993, p. 576; Service 2020, p. 1). The species migrates to shallow gravel shoals (riffles) in late winter or early spring (February through March) to spawn (Etnier and Starnes 1993, p. 576). The sickle darter requires water temperatures of 10 to 16 degrees Celsius (°C) (50 to 61 degrees Fahrenheit (°F)) for successful spawning (February through March) (Etnier and Starnes 1993, p. 576; Page and Near 2007, p. 609; Petty et al. 2017, p. 3; Alford 2019, p. 8). In the Little River system, Tennessee, eggs laid in March hatched in 27 days at an average stream temperature of 10 °C (50 °F) (Etnier and Starnes 1993, p. 576). The incubation period is likely shorter (about 2 weeks) when stream temperatures are higher (Service 2020, p. 1). The pelagic larvae presumably feed on zooplankton and other small macroinvertebrates after depleting yolk sac nutrients (Etnier and Starnes 1993, p. 576; Petty et al. 2017, p. 3).

The larvae move to the stream bottom in about 30 days (Petty et al. 2017, p. 3).

Summary of Essential Physical or Biological Features

We derive the specific physical or biological features essential for the sickle darter from studies of this species' habitat, ecology, and life history as described below. Additional information can be found in the SSA report (Service 2020, pp. 9–19). We have determined that the following physical or biological features are essential to the conservation of the sickle darter:

(1) Riffle-pool complexes and transitional areas (glides, runs, and slow-flowing pools) of geomorphically stable stream channels and banks with ample cover (including woody debris piles and water willow beds) and suitable substrates (relatively silt-free sand-detritus or gravel-cobble-boulder particles) used for foraging, sheltering, and spawning. Geomorphically stable stream channels are those that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation.

(2) Adequate flows or an instream flow regime (e.g., magnitude, frequency, duration, and seasonality of discharge over time) sufficient to provide permanent surface flows, as measured during years with average rainfall, and to maintain instream habitats used by the species for foraging, sheltering, and spawning.

(3) Adequate water quality (including, but not limited to, ammonia, conductivity, hardness, heavy metals, pH, temperature, turbidity, and other chemical constituents) necessary for normal behavior, growth, and viability of all life stages of the sickle darter.

(4) Aquatic macroinvertebrate prey items, which are typically dominated by mayflies and larval midges, but also include riffle beetles, caddisflies, dragonflies, and other invertebrates.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of the sickle darter may require special management considerations or protection to reduce the following threats: (1) Urbanization of the landscape, including, but not limited to, land conversion for urban and commercial use, infrastructure (roads, bridges, utilities), and urban water uses (water supply reservoirs, wastewater treatment); (2) nutrient pollution from agricultural activities that impact water quantity and quality; (3) significant alteration of water quality; (4) significant alteration of channel morphology or geometry, including channelization, impoundment, road and bridge construction, or instream mining, dredging, or channelization; and (5) watershed, riparian, and floodplain disturbances that release sediments or nutrients into the water or fill suitable habitat.

Management activities that could ameliorate these threats include, but are not limited to, restoration and protection of riparian corridors; implementation of best management practices to reduce sedimentation, erosion, and streambank degradation; stream bank restoration projects; increased use of stormwater management and reduction of stormwater flows into the stream systems; reduction of other watershed, riparian, and floodplain disturbances that release sediments, pollutants, or nutrients into the water; and improvements to industrial and municipal water treatment facilities and sewage systems to reduce nutrient and pathogen pollution.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat

requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat. We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat; specifically, no unoccupied areas are essential for the conservation of the species. Designating the six currently occupied units across the geographic range as critical habitat is adequate to ensure the conservation of the species, as it will support the species' redundancy and representation.

The current distribution of the sickle darter is reduced from its historical distribution. The species occurs in six populations, Little River, Emory River, Copper Creek, Middle Fork Holston River, North Fork Holston River, and Sequatchie River, across two ecoregions, Ridge and Valley and Southwestern Appalachians. We anticipate that recovery will require continued protection of the existing populations and habitat, as well as ensuring there are six or more stable populations of sickle darters with sufficient abundance and occupied reaches to increase species' viability and that these populations occur in each of the two ecoregions (Ridge and Valley and Southwestern Appalachians). The sickle darter historically occurred in the Blue Ridge ecoregion; however, the habitat in this historically occupied French Broad River no longer supports the species' life history needs. This conservation strategy and the designation of proposed critical habitat support the species' ability to withstand the loss of any one of the populations through a catastrophic event, such as the effects of a rangewide drought or mega-drought or chemical spills, and help ensure such an event is less likely to simultaneously affect all known populations. Rangewide recovery considerations, such as maintaining existing genetic diversity and striving for representation in both ecoregions in the current range of the species, were considered in formulating this proposed critical habitat designation.

Sources of data for this proposed critical habitat designation include the species status assessment (Service 2020, entire); proposed and final listing rules (85 FR 71859, November 12, 2020; 87 FR 67380, November 8, 2022); records maintained by the North Carolina Natural Heritage Program, Tennessee Department of Environment and Conservation, Tennessee Wildlife Resources Agency, Tennessee Valley Authority, and the Virginia Department of Game and Inland Fisheries; peer-reviewed research (e.g., Page 1978, Etnier and Starnes 1993, Page and Near 2007, Alford 2019); university and museum collections; and information from other survey reports on streams throughout the species' range (Conservation Fisheries Inc (CFI) and Tennessee Aquarium Conservation Institute, unpublished data) (Service 2020, p. 15). We have also reviewed available information that pertains to the habitat requirements of the sickle darter. Sources of information on habitat requirements include studies conducted at occupied sites and published in peer-reviewed articles, agency reports, and data collected during monitoring efforts (Service 2020).

In summary, for areas within the geographic area occupied by the species at the time of listing, we delineated critical habitat unit boundaries using the following criteria. We identified streams and rivers within the geographical area occupied at the time of listing (i.e., with sickle darter occurrence records from 2005 to 2019). Due to the breadth and intensity of survey efforts for freshwater fishes throughout the known range of the species, it is reasonable to assume that streams with no positive surveys since the 1980s should not be considered occupied for the purpose of our analysis. However, this does not preclude the possibility of detecting the species in other locations upon subsequent surveys. For example, in 2014 and 2019, the sickle darter was observed in the Sequatchie River—a new collection site and range extension for the species (Alford 2019, pp. 2, 6).

We then determined those streams that contain one or more of the physical or

biological features to support the life-history functions essential to the conservation of the sickle darter. We delineated end points of river units by evaluating the presence or absence of habitat conditions and physical or biological features essential to the species. We selected upstream and downstream endpoints for each stream unit where habitat conditions no longer meet species requirements (i.e., do not contain the physical or biological features essential to the conservation of the sickle darter). The endpoints often correspond to tributary confluences or dams because of the effect of these features on habitat conditions. Where favorable habitat shifts to less favorable habitat, we selected a reference point such as a highway or bridge crossing that will allow the public to identify proposed critical habitat units. The occurrence data are linear in nature; therefore, for stretches of habitat between occurrences, and between occurrences and endpoints of units, we assumed the interposing stream segments contain at least one of the physical or biological features essential to the conservation of the species and include the interposing stream segment in the proposed critical habitat unit. Based on the best available scientific data, we determined that all currently known occupied habitat for the sickle darter was also occupied by the species at the time of listing, and that these areas contain one or more of the physical or biological features essential to the conservation of the species and which may require special management considerations or protection.

Based on this analysis, the following rivers meet the criteria for areas occupied by the species at the time of listing: Little River, Emory River and Rock Creek, Copper Creek, North Fork Holston River, Middle Fork Holston River, and the Sequatchie River. The critical habitat designation does not include all streams known to have been occupied by the species historically; instead, it includes only the occupied streams within the historical range that have also retained the physical or biological features that will allow for the maintenance and expansion of existing populations.

The result was the inclusion of six units of critical habitat occupied by the sickle

darter. These six occupied units amount to approximately 104 river miles (168 river kilometers) and account for all of the proposed critical habitat. No areas outside the geographical area occupied by the species at the time of listing were delineated as proposed critical habitat.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the sickle darter. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the essential physical or biological features in the adjacent critical habitat.

We propose to designate as critical habitat those lands that we have determined are occupied at the time of listing (i.e., currently occupied) and that contain the physical or biological features that are essential to support life-history processes of the species.

Six units are proposed for designation based on one or more of the physical or biological features being present to support the sickle darter's life-history processes. Some units contain all of the identified physical or biological features and support multiple life-history processes. Some units contain only some of the physical or biological features necessary to support the sickle darter's particular use of that habitat.

The proposed critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document under **Proposed**

Regulation Promulgation. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0098 and on our internet site at <https://www.fws.gov/office/tennessee-ecological-services>.

Proposed Critical Habitat Designation

We are proposing to designate 104 river miles (rmi) (168 river kilometers (rkm)) in six units as critical habitat for the sickle darter. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the sickle darter. The six areas we propose as critical habitat are: Little River, Emory River and Rock Creek, Copper Creek, North Fork Holston River, Middle Fork Holston River, and Sequatchie River. Table 1 shows the proposed critical habitat units, riparian land ownership, and the approximate river miles of each unit. Per State regulations (Tennessee Code Annotated section 69–1–101 and Code of Virginia section 62.1-81), navigable waters are considered public rights-of-way. Lands beneath the navigable waters included in this proposed rule are owned by the State of Tennessee or the Commonwealth of Virginia. Ownership of lands beneath non-navigable waters included in this rule are determined by riparian land ownership. The riparian land adjacent to the proposed critical habitat is composed of lands in private (93 percent), State (6 percent), and Federal (1 percent) ownership.

Table 1. Proposed critical habitat units for the sickle darter. All units were occupied by the species at the time of listing and have current (2005 to 2019) sickle darter occurrences.

Unit No.	Unit Name	Riparian Land Ownership by Type (miles) (kilometers)			Length of Unit* (miles) (kilometers)
		Federal	State	Private	
1	Little River			16.0 (25.7)	16 (25.7)
2	Emory River (Subunit 2a)	1.1 (1.8)	5.8 (9.3)	22.08 (35.5)	29.03 (46.7)
	Rock Creek			1.1 (1.8)	1.1 (1.8)

	(Subunit 2b)				
3	Copper Creek			13.9 (22.4)	13.9 (22.4)
4	North Fork Holston River			25.1 (40.4)	25.1 (40.4)
5	Middle Fork Holston River			13.7 (22)	13.7 (22)
6	Sequatchie River			5.4 (8.7)	5.4 (8.7)
Total		1.1 (1.8)	5.8 (9.3)	97.3 (156.5)	104.2 (167.7)

*Note: Stream lengths may not sum due to rounding.

Approximately 79 percent (83 rmi (133 rkm)) of the critical habitat proposed for the sickle darter overlaps with currently designated Federal critical habitat for the spotfin chub (*Erimonax monachus*), yellowfin madtom (*Noturus flavipinnis*), Cumberlandian combshell (*Epioblasma brevidens*), fluted kidneyshell (*Ptychobranthus subtentus*), oyster mussel (*Epioblasma capsaeformis*), purple bean (*Villosa perpurpurea*), rough rabbitsfoot (*Quadrula cylindrica strigillata*), and slabside pearlymussel (*Pleuroaia dolabelloides*). Please refer to table 2, below, for the area of overlap with other federally designated critical habitat and to specific unit descriptions below for which currently designated Federal critical habitat overlaps with each proposed critical habitat unit for the sickle darter.

Table 2. Units and co-occurring federally listed species or designated critical habitat.

Proposed Critical Habitat Units		Co-occurring Listed Species	Overlapping Critical Habitat (miles) (kilometers)
1	Little River	Duskytail darter (<i>Etheostoma percnurum</i>)	
		Snail darter (<i>Percina tanasi</i>)	
		Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	
2a	Emory River	Spotfin chub	29.0 (46.7)
		Purple bean	
		Alabama lampmussel (<i>Lampsilis virescens</i>)	
2b	Rock Creek		
3	Copper Creek	Duskytail darter	
		Slender chub (<i>Erimystax cahni</i>)	

		Yellowfin madtom	13.9 (22.4)
		Birdwing pearlymussel (<i>Lemiox rimosus</i>)	
		Cracking pearlymussel (<i>Hemistena lata</i>)	
		Cumberlandian combshell	13.9 (22.4)
		Cumberland bean (<i>Villosa trabalis</i>)	
		Fanshell (<i>Cyprogenia stegaria</i>)	
		Fine-rayed pigtoe	
		Fluted kidneyshell	13.9 (22.4)
		Littlewing pearlymussel (<i>Pegias fabula</i>)	
		Oyster mussel	13.9 (22.4)
		Purple bean	13.9 (22.4)
		Rough rabbitsfoot	13.9 (22.4)
		Sheepnose (<i>Plethobasus cyphus</i>)	
		Shiny pigtoe (<i>Fusconaia cor</i>)	
		Slabside pearlymussel	
		Snuffbox (<i>Epioblasma triquetra</i>)	
		Spectaclecase (<i>Cumberlandia monodonta</i>)	
4	North Fork Holston River	Spotfin chub	
		Yellowfin madtom	
		Fluted kidneyshell	
		Littlewing pearlymussel	
		Shiny pigtoe	
		Slabside pearlymussel	21.0 (33.8)
5	Middle Fork Holston River	Fluted kidneyshell	13.7 (22.0)
		Littlewing pearlymussel	
		Shiny pigtoe	
		Slabside pearlymussel	13.7 (22.0)
		Tan riffleshell (<i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>))	
6	Sequatchie River	Slabside pearlymussel	5.4 (8.7)

We present brief descriptions of each of the proposed critical habitat units and why they meet the definition of critical habitat for the sickle darter, below.

Unit 1: Little River

Unit 1 consists of approximately 16.0 rmi (25.7 rkm) of the Little River beginning at the Rockford Manufacturing Company low head dam (Blount County, Tennessee) and continuing upstream to Peery's Mill Dam, Blount County, Tennessee. Land ownership

for Unit 1 is private except for any small amount of publicly owned lands in the form of bridge crossings and road easements. Unit 1 contains all of the physical or biological features essential to the conservation of the sickle darter. Special management considerations or protection may be required within Unit 1 to alleviate impacts from stressors that are anticipated to amplify degradation of the habitat, including pollutant input, siltation, excess nutrients, loss of riparian vegetation, stream habitat alteration, and pathogens. Sources of these stressors include agricultural, municipal, and residential land uses. Special management considerations related to agricultural and developed areas that will benefit the habitat in Unit 1 include, but are not limited to, the following: Treating wastewater to the highest level practicable to reduce pollution input; reducing other wastewater or stormwater runoff to decrease effects of pollution, siltation, and excess nutrients; removing barriers to increase connectivity of sickle darter populations; protecting and restoring riparian buffers to decrease siltation, nutrient, and pollution input; and encouraging agricultural and grazing practices that minimize nutrient and sediment input.

Unit 2: Emory River and Rock Creek

Unit 2 consists of two subunits comprising a total of 30.1 rmi (48.5 rkm) in Morgan and Roane Counties, Tennessee. The riparian lands in this unit are held in State (19.3 percent), Federal (3.7 percent), and private (77 percent) ownership.

Subunit 2a consists of 29.0 rmi (46.7 rkm) of the Emory River beginning at its confluence with Clifty Creek in Morgan County, Tennessee, and continuing upstream to its confluence with Little Creek, Morgan and Roane Counties, Tennessee. Ownership for Subunit 2a (Emory River) includes a mixture of Federal (National Park Service (Obed Wild and Scenic River)), State (Tennessee Wildlife Resources Agency (Catoosa Wildlife Management Area)), and private lands. The Tennessee Wildlife Resources Agency owns and manages 5.8 rmi (9.3 rkm) of the riparian area in the Catoosa Wildlife Management

Area and manages 1.1 rmi (1.8 rkm) in the Obed Wild and Scenic River through the planning and management guidelines found in the National Park Service's Wild and Scenic River Foundation Document (NPS 2015, entire). Subunit 2a contains all of the physical or biological features essential to the conservation of the sickle darter. Special management considerations or protection may be required within Subunit 2a to alleviate impacts from stressors that have led to the degradation of the habitat, including siltation, loss of riparian vegetation, elevated levels of dissolved solids, and excess nutrients. Sources of these stressors include legacy mining, petroleum activities, rural municipal and residential land uses (including point source discharges), as well as small-scale agriculture (predominantly hay and pasture). Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to the following: Treating wastewater to the highest level practicable to reduce nutrients and other pollutant input; reducing other wastewater or stormwater runoff to decrease effects of pollution, siltation, and excess nutrients; protecting and restoring riparian buffers to decrease siltation, nutrient, and pollution input; and encouraging agricultural and grazing practices that minimize nutrient and sediment input. All of Subunit 2a overlaps with designated critical habitat for the spotfin chub.

Subunit 2b (Rock Creek) consists of approximately 1.1 rmi (1.8 rkm) of Rock Creek from the Emory River confluence to a steep riffle/run sequence on Rock Creek, Morgan County, Tennessee. Land ownership for Subunit 2b is private except for any small amount of publicly owned lands in the form of bridge crossings and road easements. Subunit 2b contains all of the physical or biological features essential to the conservation of the sickle darter. Special management considerations or protection may be required within Subunit 2b to alleviate impacts from stressors that have led to the degradation of the habitat, including siltation, loss of riparian vegetation, elevated levels of dissolved solids, and excess nutrients. Sources of these stressors include legacy

mining, petroleum activities, rural municipal and residential land uses (including point source discharges), as well as small-scale agriculture (predominantly hay and pasture). Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to: Protecting and restoring riparian buffers to decrease siltation, excess nutrients, and other pollution inputs into habitat where the sickle darter occurs and encouraging agricultural and grazing practices that minimize nutrient and sediment input.

Unit 3: Copper Creek

Unit 3 consists of approximately 13.9 rmi (22.4 rkm) of Copper Creek beginning at the Clinch River confluence, Scott County, Virginia, and continuing upstream to the Obeys Creek confluence, Scott County, Virginia. Land ownership for Unit 3 is private except for any small amount of publicly owned lands in the form of bridge crossings and road easements. Unit 3 contains three of the physical or biological features essential to the conservation of the sickle darter; the water quality in this unit is degraded. Special management considerations or protection may be required within Unit 3 to alleviate impacts from stressors that are anticipated to amplify degradation of the habitat, including pathogens, siltation, elevated levels of dissolved solids, and excess nutrients. Sources of these stressors include agricultural practices (pasture grazing and unrestricted cattle access), legacy coal mining, municipal point source discharges, and residential development. Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to, the following: Treating wastewater to the highest level practicable to reduce input of pollutants; reducing other wastewater or stormwater runoff to decrease the effects of pollution, siltation, and excess nutrients; removing barriers to increase connectivity of sickle darter populations; protecting and restoring riparian buffers to decrease siltation, excess nutrients, and pollution input; and encouraging agricultural and grazing practices that

minimize nutrient and sediment input. All of Unit 3 overlaps with designated critical habitat for yellowfin madtom, Cumberlandian combshell, fluted kidneyshell, oyster mussel, purple bean, and rough rabbitsfoot.

Unit 4: North Fork Holston River

Unit 4 consists of approximately 25.1 rmi (40.4 rkm) of the North Fork Holston River beginning at the Virginia Highway 91 (VA 91) bridge crossing in Smyth County, Virginia, and continuing upstream to the VA 16 bridge crossing, Smyth County, Virginia. Land ownership for Unit 4 is private except for any small amount of publicly owned lands in the form of bridge crossings and road easements. Unit 4 contains two of the physical or biological features essential to the conservation of the sickle darter; water quality is degraded and suitable substrates are lacking in this unit. Special management considerations or protection may be required within Unit 4 to alleviate impacts from stressors that are anticipated to amplify degradation of the habitat, including pollutant input (including mercury), siltation, pathogens, excess nutrients, and instream habitat disturbance. Sources of these stressors include agricultural (unrestricted cattle access), untreated wastewater discharges, coal mining, and rural residential land uses. Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to, the following: Reducing wastewater or stormwater runoff to decrease the effects of pollution, siltation, and excess nutrients; removing barriers to increase connectivity of existing populations; protecting and restoring riparian buffers to decrease siltation, excess nutrients, and pollution input; and encouraging agricultural and grazing practices that minimize nutrient and sediment input. Approximately 21.0 rmi (33.8 rkm) of Unit 4 overlaps with designated critical habitat for slabside pearlymussel.

Unit 5: Middle Fork Holston River

Unit 5 consists of approximately 13.7 rmi (22 rkm) of the Middle Fork Holston

River beginning at the VA 91 bridge crossing in Washington County, Virginia, and continuing upstream to U.S. Highway 11 bridge crossing, Smyth County, Virginia. Land ownership for Unit 5 is private, except for any small amount of publicly owned lands in the form of bridge crossings or road easements. Unit 5 contains three of the physical or biological features essential to the conservation of the sickle darter; the water quality is degraded in this unit. Special management considerations or protection may be required within Unit 5 to alleviate impacts from stressors that are anticipated to amplify degradation of the habitat, including siltation, pathogens, nutrients, and other chemicals associated with agriculture. Sources of these stressors include agricultural (unrestricted cattle access, pasture), untreated wastewater discharges, highway/road runoff, and rural residential land uses. Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to, the following: Treating wastewater to the highest level practicable to reduce input of pollutants; reducing other wastewater or stormwater runoff to decrease the effects of pollution, siltation, and excess nutrients; removing barriers to increase connectivity of sickle darter populations; protecting and restoring riparian buffers to decrease siltation, excess nutrients, and pollution input; and encouraging agricultural and grazing practices that minimize nutrient and sediment input. All of Unit 5 overlaps with designated critical habitat for the slabside pearl mussel.

Unit 6: Sequatchie River

Unit 6 consists of approximately 5.4 rmi (8.7 rkm) of the Sequatchie River beginning at the Tennessee Highway 209 bridge crossing and continuing upstream to Cooper Mill dam Bledsoe County, Tennessee. Land ownership for Unit 6 is private except for any small amount of publicly owned lands in the form of bridge crossings and road easements. Unit 6 contains three of the physical or biological features essential to the conservation of the sickle darter; water quality is degraded in this unit. Special

management considerations or protection may be required within Unit 6 to alleviate impacts from stressors that are anticipated to amplify degradation of the habitat, including sedimentation, pathogens, excess nutrients, and development. Sources of these stressors include agriculture land development, upstream impoundments, and septic discharges in residential areas. Special management considerations related to agricultural and developed areas that will benefit the habitat in this unit include, but are not limited to, the following: Treating wastewater to the highest level practicable to reduce input of pollutants; reducing other wastewater or stormwater runoff to decrease the effects of pollution, siltation, and excess nutrients; removing barriers to increase connectivity of sickle darter populations; protecting and restoring riparian buffers to decrease siltation, excess nutrients, and pollution input; and encouraging agricultural and grazing practices that minimize nutrient and sediment input. All of Unit 6 overlaps with designated critical habitat for the slabside pearlymussel.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final rule revising the definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical

habitat as a whole for the conservation of a listed species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, Tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 et seq.) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat—and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or carried out by a Federal agency—do not require section 7 consultation.

Compliance with the requirements of section 7(a)(2) is documented through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Service Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 set forth requirements for Federal agencies to reinitiate formal consultation on previously reviewed actions. These requirements apply when the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law) and, subsequent to the previous consultation: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) if new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (4) if a new species is listed or critical habitat designated that may be affected by the identified action.

In such situations, Federal agencies sometimes may need to request reinitiation of consultation with us, but Congress also enacted some exceptions in 2018 to the requirement to reinitiate consultation on certain land management plans on the basis of a new species listing or new designation of critical habitat that may be affected by the subject federal action. See 2018 Consolidated Appropriations Act, Pub. L. 115-141, Div, O, 132 Stat. 1059 (2018). *Application of the "Destruction or Adverse Modification"*

Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the designated critical habitat in a way that appreciably diminishes the value of the critical habitat as a whole for the conservation of the listed species. As discussed above, the role of critical habitat is to support physical or biological features essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation.

Activities that the Service may, during a consultation under section 7(a)(2) of the Act, consider are likely to destroy or adversely modify critical habitat, include, but are not limited to:

(1) Actions that would block or disconnect stream and river channels and contribute to further habitat fragmentation at a scale and magnitude that appreciably diminishes the value of critical habitat (e.g., large impoundments, reservoir creation). Such activities include, but are not limited to, construction of barriers that impede the instream movement of the sickle darter (e.g., impoundments, dams, culverts, or weirs). These activities could result in destruction or fragmentation of habitat, block movements between habitats, and/or affect flows within or into critical habitat. In addition, these activities can isolate populations that are more at risk of decline or extirpation as a result of genetic drift, demographic or environmental stochasticity, and catastrophic events.

(2) Actions that would affect channel substrates and stability or geomorphology at a scale and magnitude that appreciably diminishes the value of critical habitat (e.g., multiple or large tributary or main channel rerouting, dam construction on a river with

sickle darter occurrences). Such activities include channelization, impoundment, mining, dredging, road and bridge construction, removal of riparian vegetation, and land clearing. These activities may lead to changes in channel substrates, erosion of the streambed and banks, and excessive sedimentation that could degrade sickle darter habitat.

(3) Actions that would reduce flow levels or alter flow regimes at a scale and magnitude that appreciably diminishes the value of critical habitat (i.e., flow levels or regimes that no longer support sickle darter in one or more critical habitat units). These could include, but are not limited to, activities that block or lower surface flow or groundwater levels, including channelization, impoundment, groundwater pumping, and surface water withdrawal or diversion. Such activities can result in long-term changes in stream flows that affect habitat quality and quantity for the sickle darter and its prey.

(4) Actions that would significantly alter water chemistry or quality to the extent that the value of critical habitat is appreciably diminished (i.e., water quality does not support the sickle darter's needs in one or more units). Such activities could include, but are not limited to, release of chemicals or biological pollutants or heated effluents into the surface water or connected groundwater at a point source or by dispersed release (non-point source). These activities could alter water conditions to levels that are beyond the tolerances of the sickle darter and result in direct or cumulative adverse effects to individuals and their life cycles.

(5) Actions that would significantly increase sediment deposition or stream bottom embeddedness within the stream channel to the extent that the value of critical habitat is appreciably diminished (e.g., excessive siltation such that sickle darters are not able to use the critical habitat unit). Such activities could include, but are not limited to, excessive sedimentation from livestock grazing, road construction, channel alteration, timber harvest, mining, dredging, and other watershed and floodplain disturbances. These activities could eliminate or reduce the habitat necessary for the growth and reproduction

of the sickle darter by increasing the sediment deposition to levels that would adversely affect the sickle darter's ability to complete its life cycle.

(6) Actions that would result in the introduction, spread, or augmentation of nonnative aquatic species in occupied stream segments, or in stream segments that are hydrologically connected to occupied stream segments, even if those segments are occasionally intermittent, or the introduction of other species that compete with or prey on the sickle darter to the extent that the value of critical habitat is appreciably diminished. Possible actions could include, but are not limited to, stocking of nonnative fishes or other related actions. These activities can introduce parasites or disease; result in direct predation or direct competition; or affect the growth, reproduction, and survival of the sickle darter.

Exemptions

Application of Section 4(a)(3) of the Act

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to an integrated natural resources management plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation. No DoD lands with a completed INRMP are within the proposed critical habitat designation.

Consideration of Impacts Under Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an

area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the Policy Regarding Implementation of Section 4(b)(2) of the Endangered Species Act (hereafter, the “2016 Policy”; 81 FR 7226, February 11, 2016), both of which were developed jointly with the National Marine Fisheries Service (NMFS). We also refer to a 2008 Department of the Interior Solicitor’s opinion entitled “The Secretary’s Authority to Exclude Areas from a Critical Habitat Designation under Section 4(b)(2) of the Endangered Species Act” (M-37016). We explain each decision to exclude areas, as well as decisions not to exclude, to demonstrate that the decision is reasonable.

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise discretion to exclude the area only if such exclusion would not result in the extinction of the species. In making the determination to exclude a particular area, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. We describe below the process that we undertook for taking into consideration each category of impacts and our analyses of the relevant impacts.

Consideration of Economic Impacts

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We

then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.”

The “without critical habitat” scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (e.g., under the Federal listing as well as other Federal, State, and local regulations). Therefore, the baseline represents the costs of all efforts attributable to the listing of the species under the Act (i.e., conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct a discretionary 4(b)(2) exclusion analysis.

Executive Orders (E.O.s) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly

and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. Section 3(f) of E.O. 12866 identifies four criteria when a regulation is considered a “significant” rulemaking, and requires additional analysis, review, and approval if met. The criterion relevant here is whether the designation of critical habitat may have an economic effect of greater than \$100 million in any given year (section 3(f)(1)). Therefore, our consideration of economic impacts uses a screening analysis to assess whether a designation of critical habitat for sickle darter is likely to exceed the economically significant threshold.

For this particular designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the sickle darter (IEc 2021, entire). We began by conducting a screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographic areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. In particular, the screening analysis considers baseline costs (i.e., absent critical habitat designation) and includes any probable incremental economic impacts where land and water use may already be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. The presence of the listed species in occupied areas of critical habitat means that any destruction or

adverse modification of those areas is also likely to jeopardize the continued existence of the species. Therefore, designating occupied areas of critical habitat typically causes little if any incremental impacts above and beyond the impacts of listing the species.

Therefore, the screening analysis focuses on areas of unoccupied critical habitat. If there are any unoccupied units in the proposed critical habitat designation, the screening analysis assesses whether any additional management or conservation efforts may incur incremental economic impacts. This screening analysis combined with the information contained in our IEM constitute what we consider to be our draft economic analysis (DEA) of the proposed critical habitat designation for the sickle darter; our DEA is summarized in the narrative below.

As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat for the sickle darter, first we identified, in the IEM dated August 20, 2021, probable incremental economic impacts associated with the following categories of activities: (1) Agriculture; (2) conservation/restoration; (3) development; (4) dredging; (5) flood control; (6) forest management; (7) hydropower; (8) transportation; (9) in-water construction; (10) recreation, including construction of recreation infrastructure; (11) water quality, quantity, and supply; and (12) utilities. We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. Federal agencies already are required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect the species, so if we finalize this proposed critical habitat designation, our consultations to

avoid the destruction or adverse modification of critical habitat would be incorporated into the existing consultation process.

In our IEM, we attempted to clarify the distinction between the effects that will result from the species being listed and those attributable to the critical habitat designation (i.e., difference between the jeopardy and adverse modification standards) for the sickle darter's critical habitat. The sickle darter has not been listed long enough for us to have conducted any section 7 consultations. It has been our experience that, for such species, it is more difficult to discern which conservation efforts are attributable to the species being listed and which will result solely from the designation of critical habitat. However, the following specific circumstances help to inform our evaluation: (1) The essential physical or biological features identified for critical habitat are the same features essential for the life requisites of the species, and (2) any actions that would result in sufficient harm or harassment to constitute jeopardy to the sickle darter would also likely adversely affect the essential physical or biological features of critical habitat. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation for the sickle darter totals approximately 104 rmi (168 rkm) of river and stream channels in six units in Tennessee and Virginia. All six units were occupied by the sickle darter at the time of listing and contain recent (2005 to 2019) occurrences of sickle darter. In these areas, actions that may affect the species or its habitat would also affect proposed critical habitat. Thus, it is unlikely that any additional conservation efforts would be recommended to address the adverse modification standard over and above those recommended as necessary to avoid jeopardizing the continued existence of the sickle darter. We are not proposing to

designate any units of unoccupied habitat. Because we are proposing only the designation of occupied critical habitat, the only additional costs that are expected in all of the proposed critical habitat designation are administrative costs. The entities most likely to incur incremental costs are the Federal action agencies that are parties to section 7 consultations. While the analysis for adverse modification of critical habitat will require time and resources by both the Federal action agency and the Service, these costs would predominantly be administrative in nature. About 93 percent of the proposed critical habitat designation for the sickle darter lies on private lands. As such, incremental costs from public perception of the designation have some potential to arise (IEc 2021, p. 17). However, the estimated incremental costs of critical habitat designation for the sickle darter in the first year are unlikely to exceed \$96,000 (2021 dollars) (IEc 2021, p. 14). Thus, critical habitat designation for the sickle darter is unlikely to generate costs or benefits exceeding \$100 million in a single year. Therefore, this rule is unlikely to meet the threshold for an economically significant rule, with regard to costs, under E.O. 12866.

We are soliciting data and comments from the public on the DEA discussed above. During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts we receive during the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19. We may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

Consideration of National Security Impacts

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (e.g., a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a

particular area is not covered under section 4(a)(3)(B)(i), then national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of “critical habitat.” However, the Service must still consider impacts on national security, including homeland security, on those lands or areas not covered by section 4(a)(3)(B)(i), because section 4(b)(2) requires the Service to consider those impacts whenever it designates critical habitat. Accordingly, if DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland security concerns, or we have otherwise identified national security or homeland-security impacts from designating particular areas as critical habitat, we generally have reason to consider excluding those areas.

However, we cannot automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, we must conduct an exclusion analysis if the Federal requester provides credible information, including a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If we conduct an exclusion analysis because the agency provides a reasonably specific justification or because we decide to exercise the discretion to conduct an exclusion analysis, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national-

security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for the sickle darter are not owned, managed, or used by the DoD or DHS; therefore, we anticipate no impact on national security or homeland security.

Consideration of Other Relevant Impacts

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security discussed above. To identify other relevant impacts that may affect the exclusion analysis, we consider a number of factors, including whether there are permitted conservation plans covering the species in the area—such as HCPs, safe harbor agreements (SHAs), or candidate conservation agreements with assurances (CCAAs)—or whether there are non-permitted conservation agreements and partnerships that may be impaired by designation of, or exclusion from, critical habitat. In addition, we look at whether Tribal conservation plans or partnerships, Tribal resources, or government-to-government relationships of the United States with Tribal entities may be affected by the designation. We also consider any State, local, public-health, community-interest, environmental, or social impacts that might occur because of the designation.

We have not identified any areas to consider for exclusion from critical habitat based on other relevant impacts. In preparing this proposal, we have determined that no HCPs or other management plans for sickle darter currently exist, and the proposed designation does not include any Tribal lands or trust resources or any lands for which

designation would have any economic or national security impacts. Therefore, we anticipate no impact on Tribal lands, partnerships, or HCPs from this proposed critical habitat designation and thus, as described above, we are not considering excluding any particular areas on the basis of the presence of conservation agreements or impacts to trust resources.

However, if through the public comment period we receive information that we determine indicates that there are potential economic, national security, or other relevant impacts from designating particular areas as critical habitat, then as part of developing the final designation of critical habitat, we will evaluate that information and may conduct a discretionary exclusion analysis to determine whether to exclude those areas under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19. If we receive a request for exclusion of a particular area and after evaluation of supporting information we do not exclude, we will fully describe our decision in the final rule for this action.

Required Determinations

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments

should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this proposed rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 et seq.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 et seq.), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The

SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking only on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding

destruction and adverse modification) imposed by critical habitat designation.

Consequently, it is our position that only Federal action agencies would be directly regulated if we adopt the proposed critical habitat designation. The RFA does not require evaluation of the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the Service certifies that, if made final as proposed, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that, if made final, the proposed critical habitat designation would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. In our economic analysis, we did not find that the designation of this proposed critical habitat would significantly affect energy supplies, distribution, or use. We do not foresee any energy development projects, supply distribution, or use that may affect the proposed critical habitat units for the sickle darter. Further, in our evaluation of potential economic impacts, we did not find that this proposed critical habitat designation would significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following finding:

(1) This proposed rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or Tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or Tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify

critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments, because it will not produce a Federal mandate of \$100 million or greater in any year, that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. Therefore, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the sickle darter in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from

carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed for the proposed designation of critical habitat for the sickle darter and concludes that, if adopted, this designation of critical habitat does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the proposed rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The proposed designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical or biological features of the habitat necessary for the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist State and local governments in long-range planning because they no longer have to wait for case-by-case section 7 consultations to occur.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal

funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule would not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this proposed rule identifies the physical or biological features essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed rule provides several options for the interested public to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the *Federal Register* on October 25, 1983 (48 FR 49244). This

position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship with Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the sickle darter, so no Tribal lands would be affected by the proposed designation.

References Cited

A complete list of references cited in this rulemaking is available on the internet at <https://www.regulations.gov> and upon request from the Tennessee Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team and the Tennessee Ecological Services Field Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Plants, Reporting and

recordkeeping requirements, Transportation, Wildlife.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

AUTHORITY: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. Amend § 17.11, in paragraph (h), by revising the entry for “Darter, sickle” under FISHES in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
* * * * *				
FISHES				
* * * * *				
Darter, sickle	<i>Percina williamsi</i>	Wherever found	T	87 FR 67380, 11/8/2022; 50 CFR 17.44(ee); ^{4d} 50 CFR 17.95(e). ^{CH}
* * * * *				

3. Amend § 17.95, in paragraph (e), by adding an entry for “Sickle Darter (*Percina williamsi*)” after the entry for “Rush Darter (*Etheostoma phytophilum*)”, to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(e) *Fishes.*

* * * * *

Sickle Darter (*Percina williamsi*)

(1) Critical habitat units are depicted for Bledsoe, Blount, Morgan, and Roane Counties, Tennessee, and Scott, Smyth, and Washington Counties, Virginia, on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of the sickle darter consist of the following components:

(i) Riffle-pool complexes and transitional areas (glides, runs, and slow-flowing pools) of geomorphically stable stream channels and banks with ample cover (including woody debris piles and water willow beds) and suitable substrates (relatively silt-free sand-detritus or gravel-cobble-boulder particles) used for foraging, sheltering, and spawning. Geomorphically stable stream channels are those that maintain lateral dimensions, longitudinal profiles, and sinuosity patterns over time without an aggrading or degrading bed elevation.

(ii) Adequate flows or an instream flow regime (e.g., magnitude, frequency, duration, and seasonality of discharge over time) sufficient to provide permanent surface flows, as measured during years with average rainfall, and to maintain instream habitats used by the species for foraging, sheltering, and spawning.

(iii) Adequate water quality (including, but not limited to, ammonia, conductivity, hardness, heavy metals, pH, temperature, turbidity, and other chemical constituents) necessary for normal behavior, growth, and viability of all life stages of the sickle darter.

(iv) Aquatic macroinvertebrate prey items, which are typically dominated by mayflies and larval midges, but also include riffle beetles, caddisflies, dragonflies, and other invertebrates.

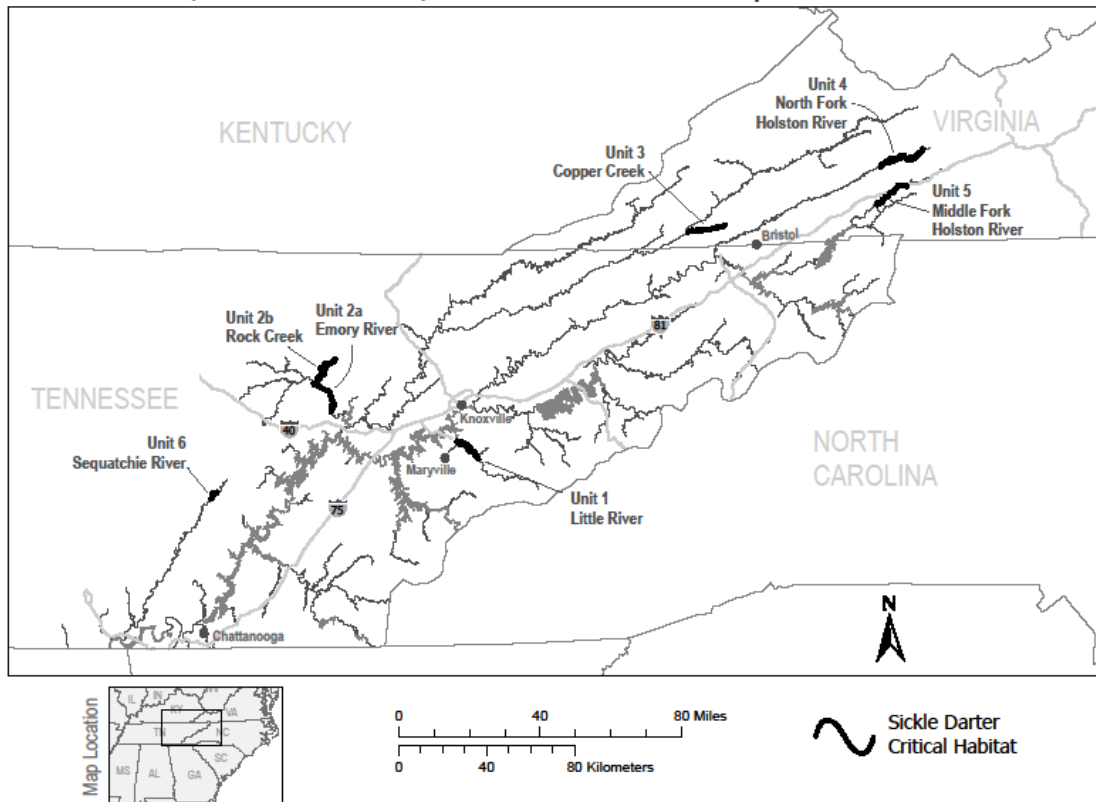
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on [EFFECTIVE DATE OF FINAL RULE].

(4) Data layers defining map units were created using Esri ArcGIS Pro mapping software, version 2.7.2 with U.S. Geological Survey's National Hydrography Dataset flowline data, on a base map of State, County, and city limit boundaries from the State of Tennessee's Strategic Technology Solutions branch. Critical habitat units were mapped using the Tennessee State Plane Coordinate System, Lambert Conformal Conic projection and North American 1983 (NAD83) datum. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's internet site at <https://www.fws.gov/office/tennessee-ecological-services>, at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0098, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

Figure 1 to Sickle Darter (*Percina williamsi*) paragraph (5)

Sickle Darter (*Percina williamsi*) Critical Habitat Index Map



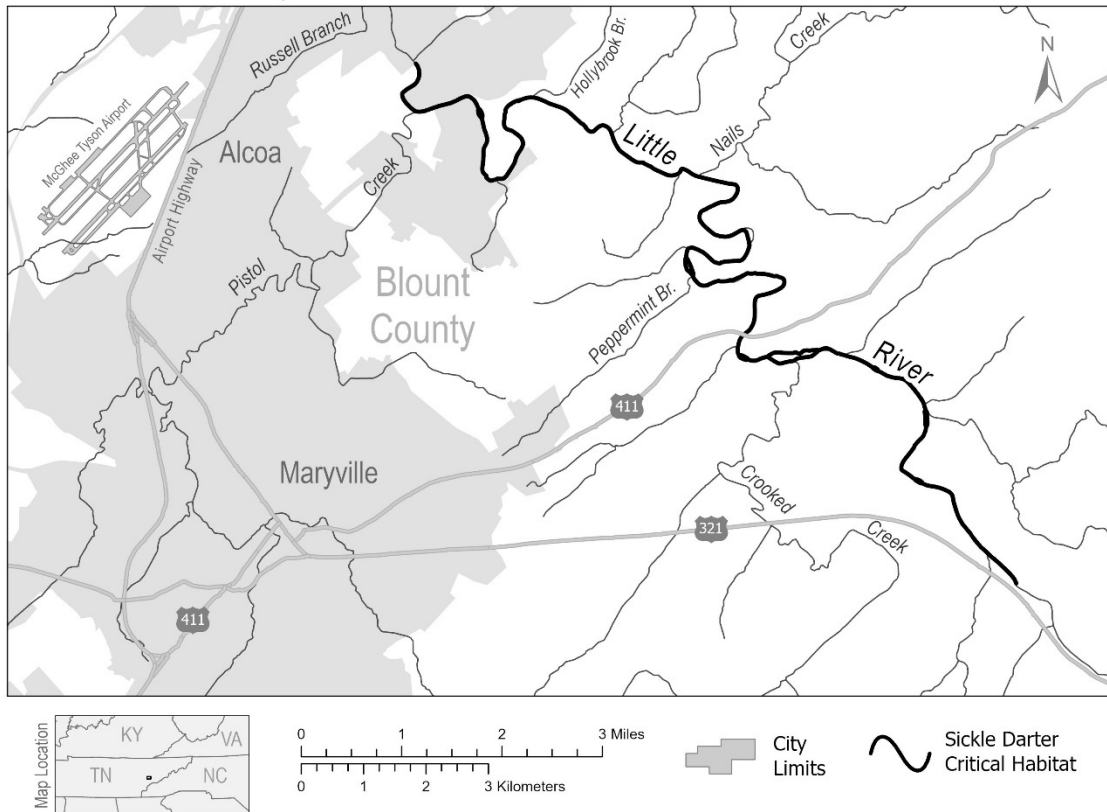
(6) Unit 1: Little River, Blount County, Tennessee.

(i) Unit 1 consists of approximately 16.0 river miles (rmi) (25.7 river kilometers (rkm)) of the Little River beginning at the Rockford Manufacturing Company low head dam and continuing upstream to Peery's Mill Dam, in Blount County, Tennessee. Unit 1 is composed of lands in private ownership.

(ii) Map of Unit 1 follows:

Figure 2 to Sickle Darter (*Percina williamsi*) paragraph (6)(ii)

Unit 1 - Little River, Sickie Darter Critical Habitat



(7) Unit 2: Emory River and Rock Creek, Morgan and Roane Counties, Tennessee.

(i) Unit 2 consists of two subunits, Subunit 2a (Emory River) and Subunit 2b (Rock Creek), comprising 30.1 rmi (48.5 rkm) in Morgan and Roane Counties, Tennessee.

(A) Subunit 2a consists of 29.0 rmi (46.7 rkm) of the Emory River beginning at its confluence with Clifty Creek in Morgan County, Tennessee, and continuing upstream to its confluence with Little Creek, in Morgan and Roane Counties, Tennessee. Subunit 2a is composed of lands in Federal (1.1 rmi (1.8 rkm)), State (5.8 rmi (9.3 rkm)), and private (22.08 rmi (35.5 rkm)) ownership, including the federally owned Obed Wild and Scenic River and the State-owned Catoosa Wildlife Management Area.

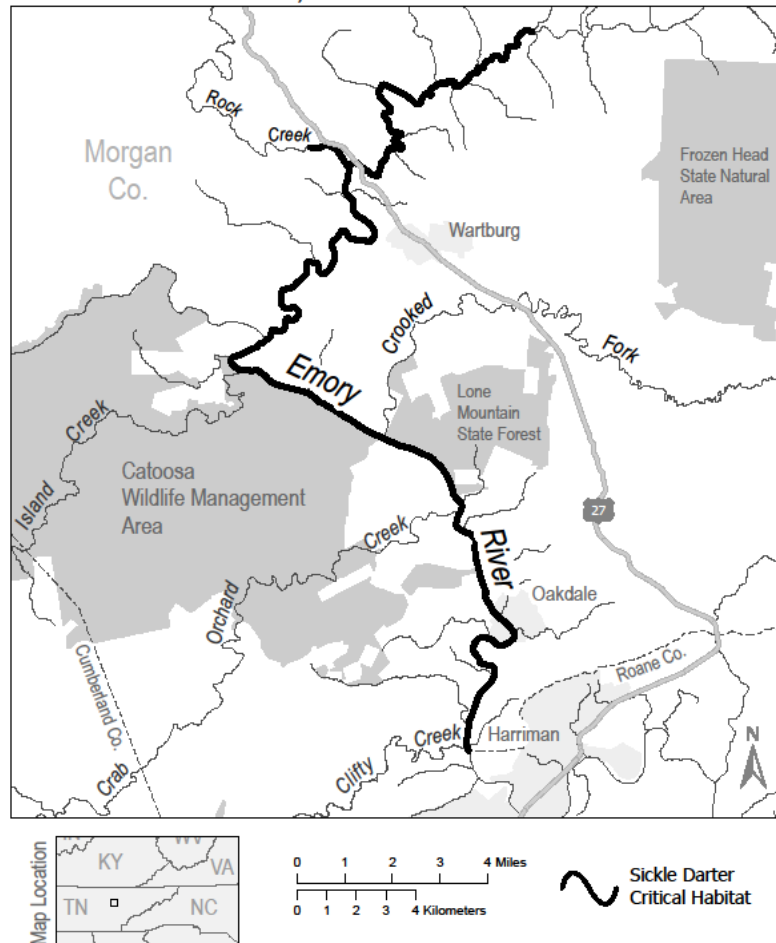
(B) Subunit 2b consists of approximately 1.1 rmi (1.8 rkm) of Rock Creek from the Emory River confluence to a steep riffle/run sequence on Rock Creek (36.133177, -84.630685), in Morgan County, Tennessee.

(ii) Map of Unit 2 follows:

Figure 3 to Sickie Darter (*Percina williamsi*) paragraph (7)(ii)

Unit 2a - Emory River, Sickie Darter Critical Habitat

Unit 2b - Rock Creek, Sickie Darter Critical Habitat



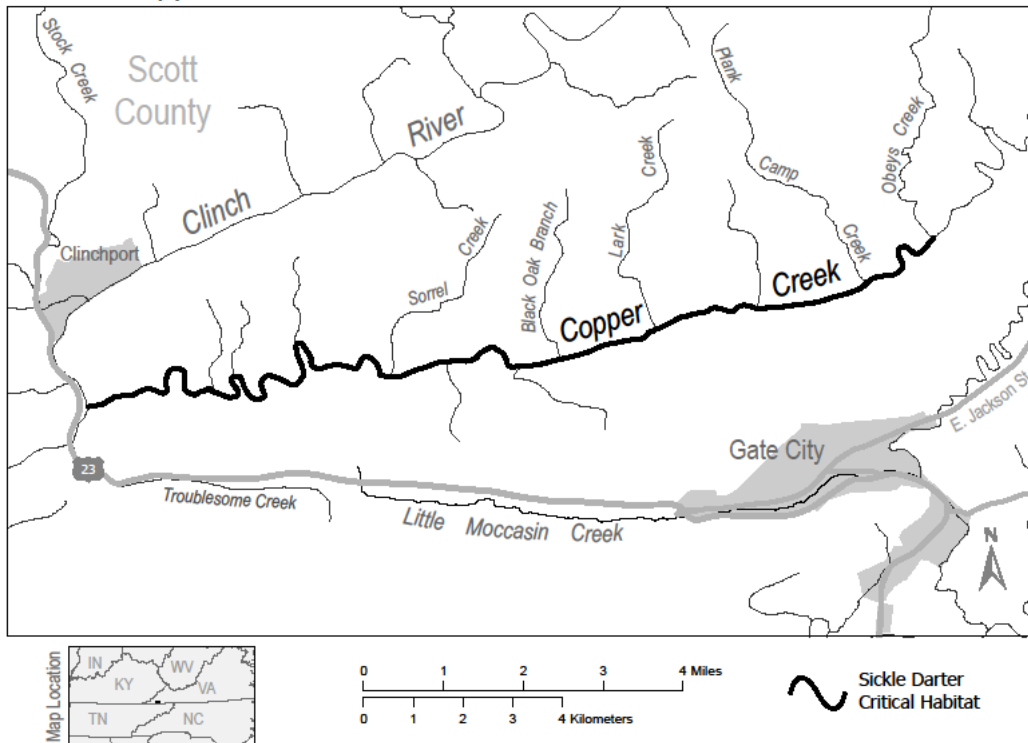
(8) Unit 3: Copper Creek, Scott County, Virginia.

(i) Unit 3 consists of approximately 13.9 rmi (22.4 rkm) of Copper Creek beginning at the Clinch River confluence and continuing upstream to the Obeyes Creek confluence, in Scott County, Virginia. Unit 3 is composed of lands in private ownership.

(ii) Map of Unit 3 follows:

Figure 4 to Sickie Darter (*Percina williamsi*) paragraph (8)(ii)

Unit 3 - Copper Creek, Sickle Darter Critical Habitat



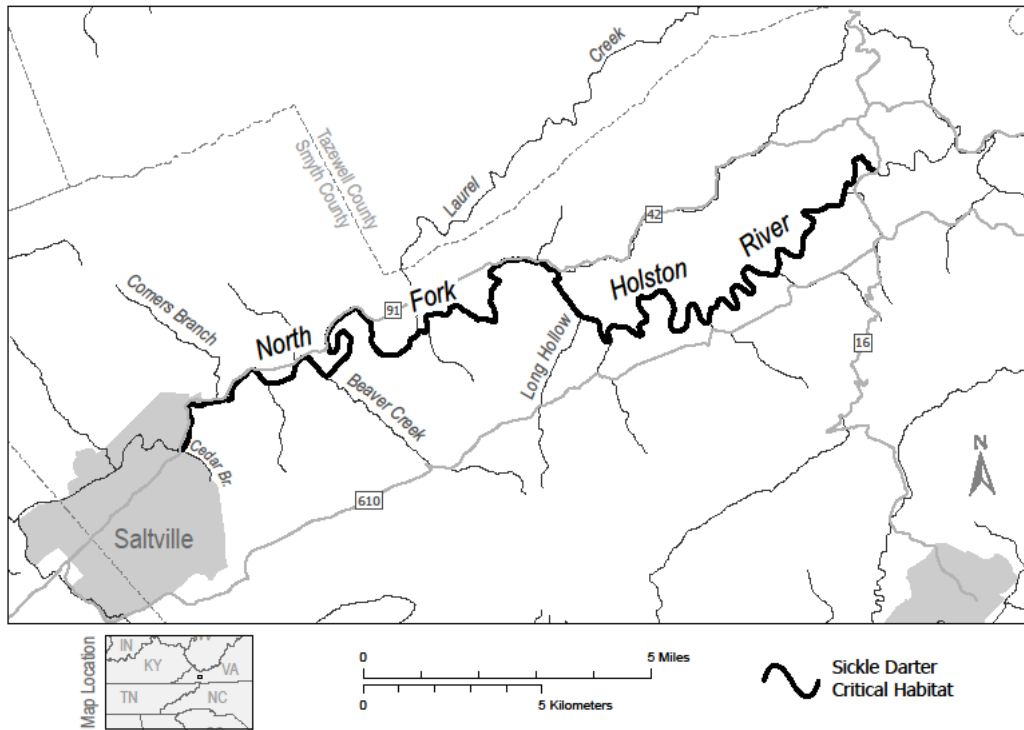
(9) Unit 4: North Fork Holston River, Smyth County, Virginia.

(i) Unit 4 consists of approximately 25.1 rmi (40.4 rkm) of the North Fork Holston River beginning at the Virginia Highway 91 (VA 91) bridge crossing in Smyth County and continuing upstream to the VA 16 bridge crossing, in Smyth County, Virginia. Unit 4 is composed of lands in private ownership.

(ii) Map of Unit 4 follows:

Figure 5 to Sickle Darter (*Percina williamsi*) paragraph (9)(ii)

Unit 4 - North Fork Holston River, Sickle Darter Critical Habitat



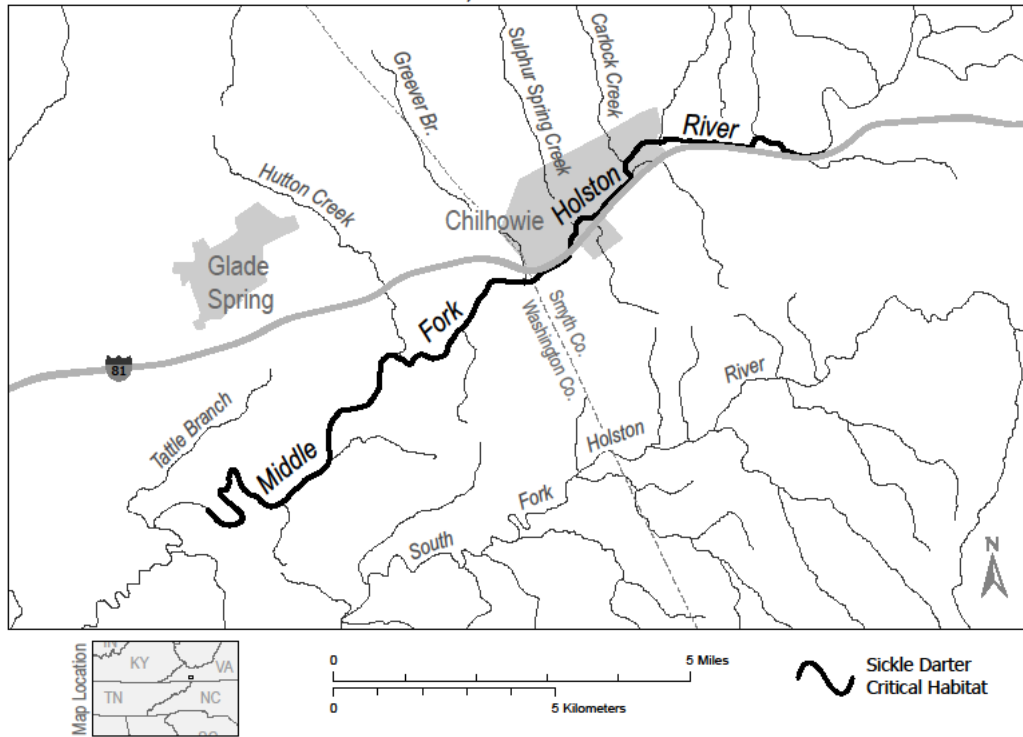
(10) Unit 5: Middle Fork Holston River, Washington and Smyth Counties, Virginia.

(i) Unit 5 consists of approximately 13.7 rmi (22 rkm) of the Middle Fork Holston River beginning at the VA 91 bridge crossing in Washington County and continuing upstream to the U.S. Highway 11 bridge crossing in Smyth County, Virginia. Unit 5 is composed of lands in private ownership.

(ii) Map of Unit 5 follows:

Figure 6 to Sickle Darter (*Percina williamsi*) paragraph (10)(ii)

Unit 5 - Middle Fork Holston River, Sickle Darter Critical Habitat



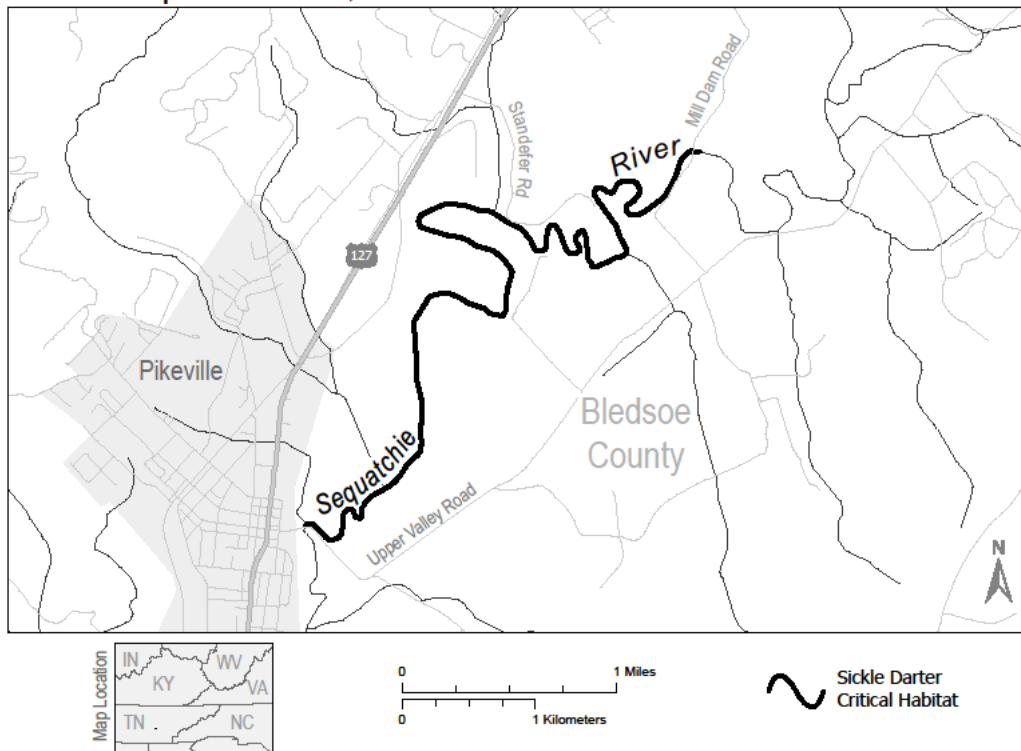
(11) Unit 6: Sequatchie River, Bledsoe County, Tennessee.

(i) Unit 6 consists of approximately 5.4 rmi (8.7 rkm) of the Sequatchie River beginning at the Tennessee Highway 209 bridge crossing and continuing upstream to Cooper Mill dam at 35.630463, -85.15394, in Bledsoe County, Tennessee. Unit 6 is composed of lands in private ownership.

(ii) Map of Unit 6 follows:

Figure 7 to Sickle Darter (*Percina williamsi*) paragraph (11)(ii)

Unit 6 - Sequatchie River, Sickie Darter Critical Habitat



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Martha Williams,
Director,
U.S. Fish and Wildlife Service.

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